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File: DWPI

Mar 15, 1979

DERWENT-ACC-NO: 1979-C4944B

DERWENT-WEEK: 197912

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TITLE: Eddy current displacement transducer - has AC fed coils adjacent layers of high conductivity and low permeability material

INVENTOR: NUERNBERGE, W

PATENT-ASSIGNEE:

ASSIGNEE	CODE
SIEMENS AG	SIEI

PRIORITY-DATA: 1977DE-2739054 (August 30, 1977)

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PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
<u>DE 2739054 A</u>	March 15, 1979		000	
<u>DE 2739054 C</u>	October 28, 1982		000	

INT-CL (IPC): G01B 7/02; G01D 5/14

ABSTRACTED-PUB-NO: DE 2739054A

BASIC-ABSTRACT:

A probe member (1) is subjected to small displacements (s_1, s_2) by applied forces (K_1, K_2). Attached to the probe are transducer elements (2) of a conductive, relatively low permeability material such as stainless steel. Closely spaced to the transducer elements (of the order of 10-1 - 10-2 mm) is the rear surface of AC fed induction coils (3), the outer surfaces of which are embedded in an isolating potting compound (6).

A metallic screen (5) surrounds the device. The relative permeability of the transducer element is in the range $1 < \mu_r < 10$ and the frequency of the AC supply to the induction coils is given by $2(\pi)f\mu_r(\sigma)=\text{const.}$ where f is the frequency and (σ) is the conductivity of the transducer material. The relative permeability is typically about 3.

TITLE-TERMS: EDDY CURRENT DISPLACEMENT TRANSDUCER AC FEED COIL ADJACENT LAYER HIGH CONDUCTING LOW PERMEABLE MATERIAL

DERWENT-CLASS: S02

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